

R E M A R K S

Claims 1-21 are pending in this application. No amendments have been made by way of the present submission, thus, no new matter has been added.

On February 12, 2004, Applicants filed a Request for Continued Examination. Along with the Request for Continued Examination included arguments and remarks. Additionally, Applicants requested suspension of action on the present application pursuant to 37 C.F.R. § 1.103(c) for a period of three months. However, the U.S.P.T.O. has not provided Applicants with the requested suspension of action. Rather, on March 15, 2004, the U.S.P.T.O. issued an Office Action. Applicants' representatives have been in contact with the Examiner in charge of the above-identified application, as well as the Examiner's Supervisor, Mark Huff. Supervisory Examiner Mark Huff indicated this issue will be rectified and that the Office Action dated March 15, 2004 would be repealed. Pursuant to a telephone conversation of May 11, 2004 with Examiner Chea, the March 15, 2004 Office Action has been repealed. The Examiner also indicated that the period of suspension would expire on May 12, 2004. Accordingly, Applicants are now submitting arguments to supplement the arguments previously submitted on February 12, 2004.

In view of the following remarks, Applicants respectfully request that the Examiner withdraw all rejections and allow the currently pending claims.

#### **Objections to the Specification**

On November 7, 2003, Applicants addressed the Examiner's objection to the Supplemental Combined Declaration and Power of Attorney, which was filed on June 13, 2003. However, the Examiner has not yet commented on Applicants remarks. Applicants therefore request the Examiner respond on the record in this regard.

#### **Issues Under 35 U.S.C. §102(b)/103(a)**

The Examiner has rejected claims 1 and 9-14 under 35 U.S.C. §102(b) as being anticipated by, or in the alternative, under 35 U.S.C. §103(a) as obvious over either JP 2000-10233 (which is equivalent to United States Patent Number 6,165,707 issued to Hirano and hereinafter referred to as Hirano '707) or U.S. Patent No. 6,100,022, issued to Inoue et al. (hereinafter referred to as Inoue '022).

The Examiner has also rejected claims 1 and 4-15 under 35 U.S.C. §102(b) as being anticipated by JP 2000-112072 (hereinafter referred to as JP '072).

The Examiner has also rejected claims 1-16 and 18-20 under 35 U.S.C. §103(a) as being obvious over JP '072.

Lastly, the Examiner has rejected claim 17 under 35 U.S.C. §103(a) as being obvious over JP '072 in view of Ito et al, U.S. Patent No. 6,150,084 (hereinafter referred to as Ito '084).

Applicants respectfully traverse each of the above rejections.

Applicants hereby incorporate all arguments previously made.

In the Remarks submitted on February 12, 2004, Applicants explained that none of the references cited by the Examiner suggest or disclose Condition (I) or Condition (II) as required by the present claims. By providing and explaining previously submitted Declarations (the Nakano Declaration of November 22, 2002 and the Oikawa Declaration of November 7, 2003), Applicants have supported these assertions.

In particular, Claim 1 of the present invention, upon which all other claims depend, relates to a photothermographic material. This material must satisfy at least one of Condition I or Condition II. Condition I includes the limitation that

the  $\text{NH}_4^+$  content in all the layers formed on the image-forming layer side of the support is  $0.06 \text{ mmol/m}^2$  or less

Condition II includes the limitation that the

film surface pH of the image-forming layer side of the support is substantially unchanged after coating, and the layers formed on the image-forming layer side of the support do not substantially contain ammonia

However, the Examiner's anticipation rejection is not satisfied, because the primary references fail to suggest or disclose either Condition I or Condition II. Without such inherent disclosure (which was shown to be lacking by the November 7, 2003 Oikawa Declaration), there can be no anticipation. Further, absent inherent disclosure, the lack of any motivation, such as might be provided by explicit disclosure, to arrive at Condition I or Condition II, prevents a proper *prima facie* case of obviousness from being asserted.

Applicants request that the Examiner again review the submitted Declarations. In the Advisory Action dated November 25, 2003, the Examiner indicated that he does not believe that the Declaration addresses issues concerning unexpected results. However, the Declaration was provided in order to show the lack of inherency in the present claims based upon the cited art. Unexpected results are not relevant to overcoming an anticipation rejection based upon inherency. Also, once it is established that a reference does not inherently disclose certain subject matter recited in a claim, any *prima facie* case of obviousness is unlikely since without specific disclosure or inherent disclosure, the reference cannot suggest the claimed limitation to one of ordinary skill in the art.

As explained in the previous Response, the references fail to suggest or disclose Condition I or Condition II. For the Examiner's convenience, these arguments are replicated below.

1. The primary references do not disclose, either explicitly or inherently, Condition I or Condition II.

The primary references cited by the Examiner are Inoue '022, Hirano '707 and JP '072. In the November 7, 2003 Oikawa Declaration, three samples (Samples 1, 2, and 3) were tested. Sample 1 was prepared according to Example 1 of Inoue '022, one of the primary references). Sample 2 was prepared according to Examples 1-2 of Hirano '707, another one of the primary references. Lastly, Sample 3 was prepared according to Sample 3 shown in Table 1 of JP '072.

A review of the results for each of Samples 1, 2 and 3 reveal that the amounts of ammonium ion in all the layers formed on the image forming side are outside of the claimed ranges. Samples 1, 2 and 3 contained 0.24, 0.26 and 0.23 mmol/m<sup>2</sup>, respectively, of ammonium ion in all the layers formed on the image forming layer side. However, Condition I of the claims requires that the amount of ammonium ion in all the layers formed on the image-forming layer side of the support be 0.06 mmol/m<sup>2</sup> or less. Condition II of the claims requires that the layers formed on the image-forming layer side of the support do not substantially contain ammonia. Neither of these conditions is achieved by the cited art.

Accordingly, the cited references of Inoue '022, Hirano '707 and JP '072 fail to achieve the presently claimed subject matter. The references also lack any explicit disclosure of Condition I or Condition II, thus no anticipation exists. Additionally, there also exists no *prima facie* case of obviousness. Specifically, there exists no motivation in any of the references including the secondary reference of Ito '084 to achieve the presently claimed subject matter. Thus, the Examiner has failed to present a valid *prima facie* case of obviousness.

However, even if the Examiner has hypothetically established a *prima facie* case of obviousness, a point not conceded by Applicants, Applicants submit that the presently claimed subject matter achieve unexpectedly superior results compared to the cited art.

None of the art cited by the Examiner suggests or discloses that by utilizing specific compounds and specific amounts of ammonium ions, that lower temperature and lower humidity dependency would result. As shown in the Table 1 of the present specification, the claimed invention shows much lower temperature and humidity dependency than samples No. 1-3 and No. 1-8. Applicants submit that one skilled in the art could not have expected that such excellent effects could be obtained by satisfying Condition I of the claimed invention.

Also, as shown in Table II of the present specification, the claimed invention shows much lower temperature and humidity dependency than comparative samples that do not satisfy Condition II. Applicants submit that one skilled in the art could not have expected that such excellent effects could be obtained by satisfying Condition II of claimed invention.

2. The present invention achieves Condition I or Condition II

The Examiner has also previously requested that Applicants prove why Condition I or Condition II is met by the present invention, but not by the prior art. Applicants submit that it has been shown above that the prior art fails to satisfy either Condition I or Condition II. Further, there is no requirement that Applicants provide why Condition I or Condition II are met by the present invention. In fact, it is the fact that Applicant's invention satisfies Condition I or Condition II, which distinguishes it from the cited art. In other words, it is in Condition I or Condition II that the limitations exist which allow the present invention to achieve superiority over the prior art. Direct comparison with the primary reference is unnecessary since it has already been shown that the references do not satisfy Condition I or Condition II. As such, and as outlined in the specification, materials which do not meet these conditions are not able to achieve the superior results of the present invention.

One of the features of the present invention that can contribute to lowering the temperature or humidity dependency during development, resides in the  $\text{NH}_4^+$  content. Specifically, the  $\text{NH}_4^+$  content in all in all the layers formed on the image-forming layer side is limited to  $0.06 \text{ mol/m}^2$  or less, as required by Condition I. Another feature of the present invention is that the layers formed on the image-forming layer side do not substantially contain ammonia, so as to not change the film pH of the image-forming layer side, as required by Condition II.

The present inventors have found that when ammonia is present in the layers formed on the image-forming layer side, the film surface pH of the image-forming layer side or the like varies depending on the temperature or humidity during development. Such variations influence the ability of the particular nucleating agents defined in claim 1. According to the present invention, the particular nucleating agents are utilized under either Condition I or Condition II. Consequently, the temperature or humidity dependency during development can be reduced according to the present invention.

Without the disclosure of Condition I or Condition II, in conjunction with the presently claimed compounds, the prior art is not able to achieve the reduced temperature and humidity dependency properties of the present invention. Accordingly, there exists neither anticipation nor obviousness, based upon the cited art.



However, in order to further prosecution, Applicants are hereby providing additional Comparative Experiments. These Experiments are attached hereto in the form of an additional Declaration by Tokuju Oikawa, dated March 4, 2004.

#### NEW COMPARATIVE EXPERIMENTATION

In the Declaration (executed on March 4, 2004 by Tokuju Oikawa), it is apparent that materials within the scope of currently pending claims have a much lower temperature and humidity dependency compared to the materials of Inoue '022 or Hirano '707. For instance, Sample Numbers 7-9, 12-14 and 17-19 in Table 1 of the Declaration were prepared in the same manner as Example 1 of Inoue '022. Samples 7A-9A, 12A-14A and 17A-19A were respectively prepared in the same manner as each of Sample Numbers 7-9, 12-14 and 17-19, except that SBR latex, which is the same as that used as the binder for an image-forming layer in Example 1 described in the present application, was used as a binder for an emulsion layer on an image-forming layer side of the support in place of LACSTAR 3307B, and an NaOH was used as a pH modifier. A review of this direct comparison between inventive samples and samples according to Inoue '022, not only reveals that Inoue '022 fails to satisfy Condition I (having an  $\text{NH}_4^+$  content in all the layers formed on the image-forming layer side of the support of  $0.06 \text{ mmol/m}^2$  or less) but also fails to

satisfy Condition II (wherein the film surface pH of the image-forming layer side of the support is substantially unchanged after coating, and the layers formed on the image-forming layer side of the support do not substantially contain ammonia). Importantly, the differences in the line widths found for the samples according to Inoue '022 were much larger than the samples according to the present invention. Thus, it is clear that the samples, which fall within the scope of pending claim 1, had much lower temperature and humidity dependency than the samples which followed in the scope of Inoue '022.

Concerning Hirano '707, Applicants direct the Examiner's attention to Sample Number I-2, which was prepared in the same manner as Example I-2 as described in Hirano '707. Sample I-2A, according to the present invention, was prepared in the same manner as Sample I-2, except that SBR latex, which is the same as that used as binder for the image-forming layer in Example 1 of the present application, was used as the binder for the emulsion layer on the image-forming layer side of the support in place of LACSTAR 3307B, and NaOH was used as a pH modifier.

A review of the results for Samples I-2 and I-2A reveals that the sample according to Hirano '707 fails to satisfy either of Condition I or Condition II. Moreover, the differences in line widths for Sample I-2A (present invention), was much smaller than that for Sample I-2 (Hirano '707). Accordingly, it

is clear that the presently claimed subject matter has a much lower temperature and humidity dependency than Samples, which fall within the scope of Hirano '707.

Further, Applicants point out that Sample Numbers 7-9 and 7A-9A contain compound C-1, described in the Declaration, which falls within the scope of Formula (1) defined in pending claim 1, as a nucleating agent in the image-forming layer. Sample Numbers 12-14 and 12A-14A contained compound C-8, also described in the Declaration, falls within the scope of Formula (2) of pending claim as a nucleating agent in the image-forming layer. Additionally, Sample Numbers 17-19 and 17A-19A contain compound H-1, described in the Declaration, do not fall within any of Formulae (1)-(3). Additionally, Sample Numbers I-2 and I-2A contained compound 3, described in the Declaration, falls within the scope of Formula (3) defined in pending claim 1, as a nucleating agent in the image-forming layer. All of the Samples prepared contained compound F, described in the Declaration, which falls within the scope of Formula (A) defined in pending claim 1, in the image-forming layer.

Accordingly, Applicants respectfully submit that the Examiner has failed to present a valid case of anticipation or *prima facie* case of obviousness. Further, even if the Examiner has hypothetically presented a *prima facie* case of obviousness, the unexpected results according to the present invention with

respect to temperature and humidity dependency, rebut any hypothetical *prima facie* case of obviousness. Accordingly, the Examiner is respectfully requested to withdraw all rejections and allow the currently pending claims.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Craig A. McRobbie (Reg. No. 42,874) at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Attachment: Declaration under 37 C.F.R. 1.132 by Tokuju Oikawa dated  
March 4, 2004

(Rev. 02/12/2004)